

Core 3568J | System on Module

Datasheet V1.1

Changes

Version	Date	Changes	Name
1.0	2022-04-22	First version	Mixtile
1.1	2022-05-10	Update pin info	Mixtile

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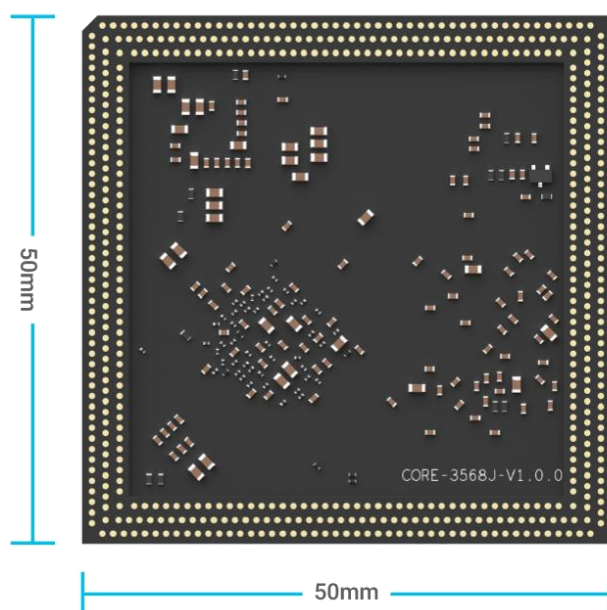
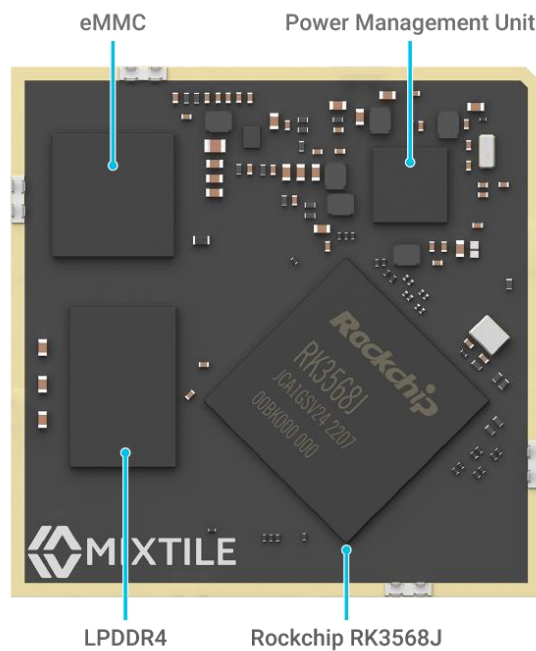
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1. Introduction

1.1 Product Description

Mixtile industrial-grade System-on-Module, Core 3568J, is designed for supporting multiple applications based on ARM high-performance and low-power processors. Please be noted that all pins of Mixtile Core 3568J are exactly same as Mixtile Core 3568.

The module is mainly composed of SoC RK3568J and LPDDR4, EMMC, plus PMIC. As the control unit of the entire system, it provides a basic hardware environment to run the entire system.



Optimized Board-to-Board Connecting Solution for System-on-Module



With extensive experience in designing system-on-modules, Mixtile innovated a special solution to keep costs low and maintain a small footprint while maximizing signal transmission rates of the SoM with its carrier board. Mixtile's optimized Board-to-Board connection intelligently saves space, reduces the transmission rate loss from the connector, and benefits from larger pins. The transmission rate for any connection is the main consideration, especially in system-on-modules, for maintaining a stable system. Mixtile's unique design enables high signal stability.

1.2 Technical Specification

Basic Specification

CPU	Quad-core ARM Cortex-A55, Neon and FPU, up to 1.4GHz
GPU	G52 2EE
NPU	RK NN, 1Tops
DDR	2/4GB 32-bit LPDDR4
Storage	16/32GB eMMC 5.1

Hardware

Supply	3.3 VDC / 5.0 VDC
Temperature range	-40 to +85°C operating
Dimensions	50mm x 50mm x 5mm
Total interfaces on BGA	536 pins
Video Decoder	4KP60 H.264/H.265/VP9
Video Encoder	1080P60 H.264/H.265
ISP	8M ISP, HDR
MIPI_CSI	MIPI-CSI2, 1×4-lane/2×2-lane@2.5Gbps/lane
DVP/CIF	IO:150MHz, Support BT.656/601/1120
Display	RGB, LVDS/MIPI DSI, HDMI, eDP, Eink
SDIO	SDIO 3.0 x3
Peripheral	USB 2.0 HOST, USB2.0 OTG USB3.0 OTG, USB3.0 HOT, SATA 3.0 x3, PCIE 2.1(1x1Lane), QSGMII x1, Combo with 3 Serdes Lanes PCIE3.0 1 ×2Lanes/2 ×1Lane@8Gbps
Ethernet	2x GMAC (10/100/1000M)
Audio	1x 8ch I2S/TDM, 2x2ch I2S 8ch PDM, 1x SPDIF OUT
Others	10x UART, 4x SPI, 16x PWM, 6x I2C, 3x CAN FD, 8x SAR-ADC
OTP	OTP (Size 8K)

Crypto

SM3/4, TEE, Trustzone

System

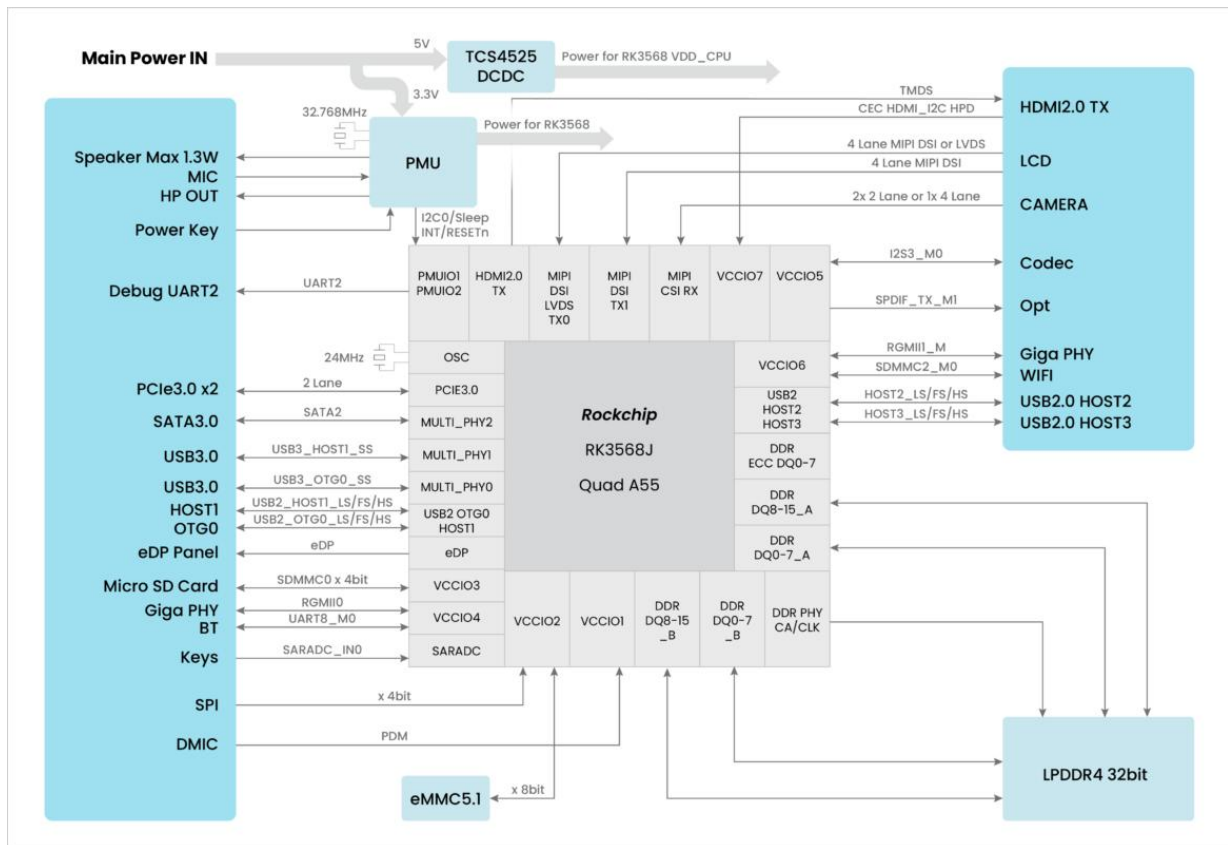
System

Support Android 11.0, Debian 10 System

Advanced function

Provide Linux container on Android, deploy Linux applications seamlessly on Android

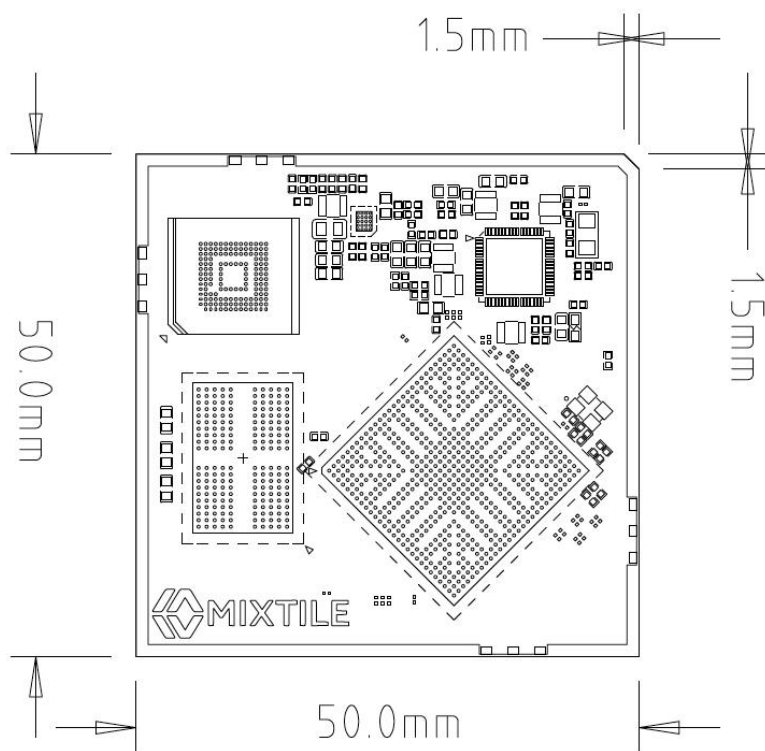
1.3 Block Diagram



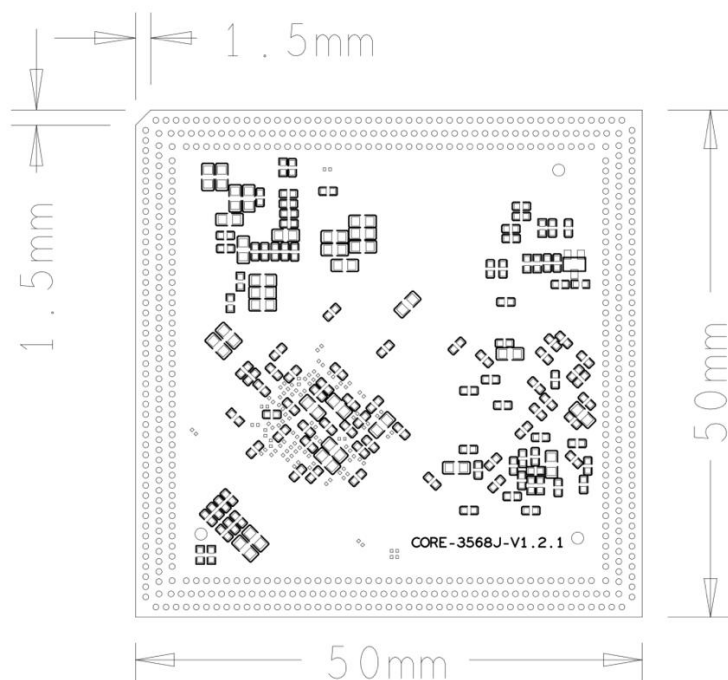
2. Product Dimension

2.1 Top View of Core 3568J

Core 3568J Size: 50mmX50mmX5mm

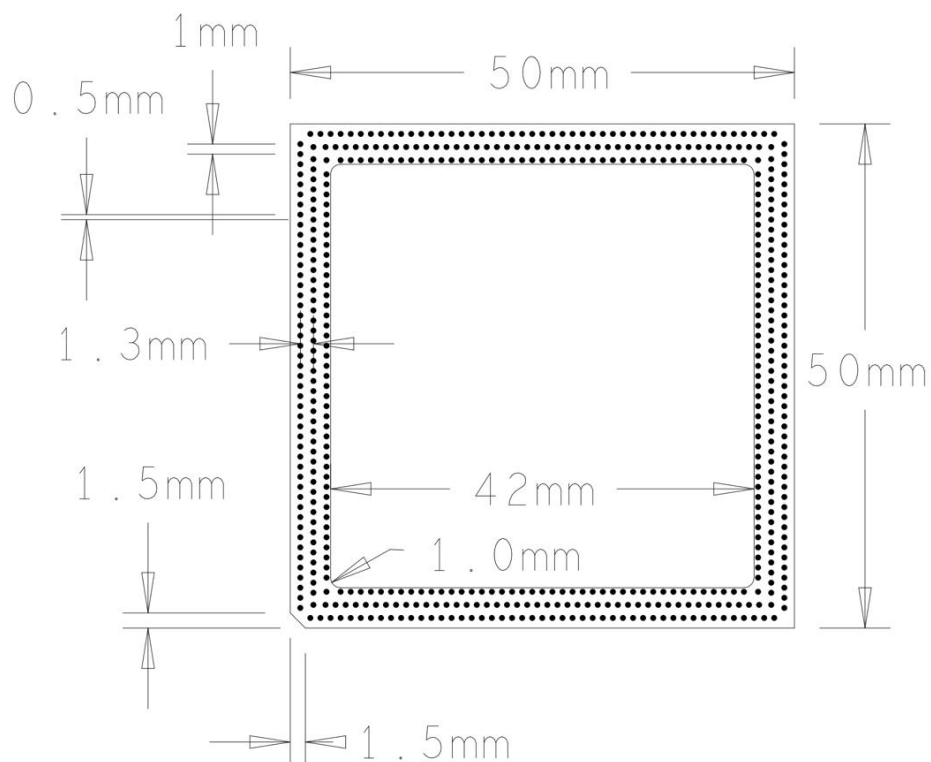


2.2 Bottom View of Core 3568J

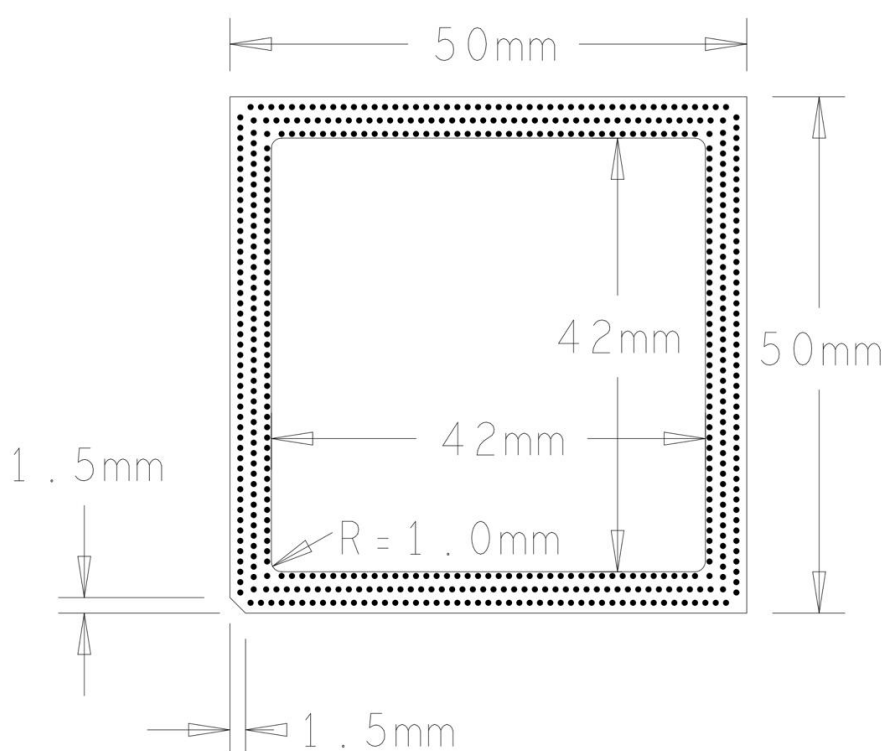


2.3 Top View of Carrier board for Core 3568J

Carrier Board Size: 50mmX50mmX1.6mm

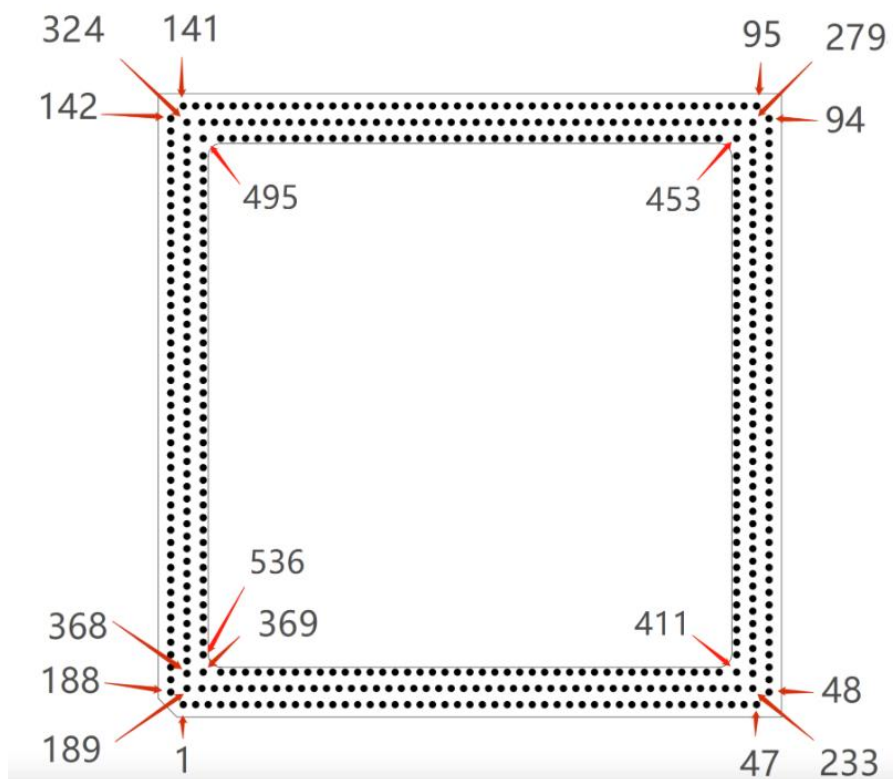


2.4 Bottom View of Carrier board for Core 3568J



3. Pins Definition

3.1 Top View of Pin Arrangement



3.2 Pin Info

PIN number	PIN name	PIN Type	Voltage Level	CPU ball name/multiplex function	CPU ball number	Description
1	GND	POWER	0	N/A	N/A	referenced ground of power and signal
2	USB3_HOST1_SSRXP	LVDS input	lvds	USB3_HOST1_SSRXP/SATA1_RXP/QSGMII_RXP_M0	U28	USB3.0 HOST1 SuperSpeed receive differential Positive
3	USB3_HOST1_SSRXN	LVDS input	lvds	USB3_HOST1_SSRXN/SATA1_RXN/QSGMII_RXN_M0	U27	USB3.0 HOST1 SuperSpeed receive differential Negative
4	GND	POWER	0	N/A	N/A	referenced ground of power and signal
5	USB3_HOST1_SSTXN	LVDS output	lvds	USB3_HOST1_SSTXN/SATA1_TXN/QSGMII_TXN_M0	V27	USB3.0 HOST1 SuperSpeed transmit differential Negative
6	USB3_HOST1_SSTXP	LVDS output	lvds	USB3_HOST1_SSTXP/SATA1_TXP/QSGMII_TXP_M0	V28	USB3.0 HOST1 SuperSpeed transmit differential Positive
7	GND	POWER	0	N/A	N/A	referenced ground of power and signal
8	SATA0_RXN	LVDS input	lvds	USB3_OTG0_SSRXN/SATA0_RXN	R27	SATA receive signal DM
9	SATA0_RXP	LVDS input	lvds	USB3_OTG0_SSRXP/SATA0	R28	SATA receive signal DP

				_RXP		
10	GND	POWER	0	N/A	N/A	referenced ground of power and signal
11	SATA0_TXN	LVDS output	lvds	USB3_OTG0_SSTXN/SATA0_TXN	T27	SATA transmission signal DM
12	SATA0_TXP	LVDS output	lvds	USB3_OTG0_SSTXP/SATA0_TXP	T28	SATA transmission signal DP
13	GND	POWER	0	N/A	N/A	referenced ground of power and signal
14	USB3_OTG0_DM	LVDS output/Input	lvds	USB3_OTG0_DM	P28	USB3 OTG0 HS/FS/LS Data Minus
15	USB3_OTG0_DP	LVDS output/Input	lvds	USB3_OTG0_DP	P27	USB3 OTG0 HS/FS/LS Data Plus
16	GND	POWER	0	N/A	N/A	referenced ground of power and signal
17	USB3_HOST1_DM	LVDS output/Input	lvds	USB3_HOST1_DM	P25	USB3 HOST1 HS/FS/LS Data Minus
18	USB3_HOST1_DP	LVDS output/Input	lvds	USB3_HOST1_DP	P24	USB3 HOST1 HS/FS/LS Data Plus
19	GND	POWER	0	N/A	N/A	referenced ground of power and signal
20	EDP_TX_D3N	LVDS output	lvds	EDP_TX_D3N	N27	EDP transmit differential data lane 3 Negative
21	EDP_TX_D3P	LVDS output	lvds	EDP_TX_D3P	M28	EDP transmit differential data lane 3 Positive
22	GND	POWER	0	N/A	N/A	referenced ground of power and signal
23	EDP_TX_D2N	LVDS output	lvds	EDP_TX_D2N	M27	EDP transmit differential data lane 2 Negative
24	EDP_TX_D2P	LVDS output	lvds	EDP_TX_D2P	L28	EDP transmit differential data lane 2 Positive
25	GND	POWER	0	N/A	N/A	referenced ground of power and signal
26	EDP_TX_D1N	LVDS output	lvds	EDP_TX_D1N	L27	EDP transmit differential data lane 1 Negative
27	EDP_TX_D1P	LVDS output	lvds	EDP_TX_D1P	K28	EDP transmit differential data lane 1 Positive
28	GND	POWER	0	N/A	N/A	referenced ground of power and signal
29	EDP_TX_D0N	LVDS output	lvds	EDP_TX_D0N	K27	EDP transmit differential data lane 0 Negative
30	EDP_TX_D0P	LVDS output	lvds	EDP_TX_D0P	J28	EDP transmit differential data lane 0 Positive
31	GND	POWER	0	N/A	N/A	referenced ground of power and signal
32	EDP_TX_AUXN	LVDS output/input	lvds	EDP_TX_AUXN	M25	EDP AUX differential Negative
33	EDP_TX_AUXP	LVDS output/input	lvds	EDP_TX_AUXP	L25	EDP AUX differential Positive
34	GND	POWER	0	N/A	N/A	referenced ground of power and signal

35	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
36	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
37	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
38	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
39	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
40	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
41	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
42	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
43	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
44	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
45	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
46	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
47	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
48	GND	POWER	0	N/A	N/A	referenced ground of power and signal
49	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
50	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
51	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
52	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
53	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
54	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
55	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
56	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
57	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
58	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
59	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
60	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
61	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
62	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
63	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
64	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
65	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
66	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
67	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
68	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
69	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
70	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
71	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
72	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
73	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
74	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
75	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
76	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED

77	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
78	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
79	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
80	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
81	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
82	GND	POWER	0	N/A	N/A	referenced ground of power and signal
83	MIPI_CSI_RX_D3N	LVDS input	lvds	MIPI_CSI_RX_D3N	AE9	MIPI CSI receive differential data lane 3 Negative
84	MIPI_CSI_RX_D3P	LVDS input	lvds	MIPI_CSI_RX_D3P	AD9	MIPI CSI receive differential data lane 3 Positive
85	GND	POWER	0	N/A	N/A	referenced ground of power and signal
86	MIPI_CSI_RX_D2N	LVDS input	lvds	MIPI_CSI_RX_D2N	AD11	MIPI CSI receive differential data lane 2 Negative
87	MIPI_CSI_RX_D2P	LVDS input	lvds	MIPI_CSI_RX_D2P	AE11	MIPI CSI receive differential data lane 2 Positive
88	GND	POWER	0	N/A	N/A	referenced ground of power and signal
89	MIPI_CSI_RX_D1N	LVDS input	lvds	MIPI_CSI_RX_D1N	AH11	MIPI CSI receive differential data lane 1 Negative
90	MIPI_CSI_RX_D1P	LVDS input	lvds	MIPI_CSI_RX_D1P	AG11	MIPI CSI receive differential data lane 1 Positive
91	GND	POWER	0	N/A	N/A	referenced ground of power and signal
92	MIPI_CSI_RX_D0N	LVDS input	lvds	MIPI_CSI_RX_D0N	AH12	MIPI CSI receive differential data lane 0 Negative
93	MIPI_CSI_RX_D0P	LVDS input	lvds	MIPI_CSI_RX_D0P	AG12	MIPI CSI receive differential data lane 0 Positive
94	GND	POWER	0	N/A	N/A	referenced ground of power and signal
95	GND	POWER	0	N/A	N/A	referenced ground of power and signal
96	MIPI_CSI_RX_CLK1N	LVDS input	lvds	MIPI_CSI_RX_CLK1N	AH9	MIPI CSI receive differential Clock 1 Negative
97	MIPI_CSI_RX_CLK1P	LVDS input	lvds	MIPI_CSI_RX_CLK1P	AG9	MIPI CSI receive differential Clock 1 Positive
98	GND	POWER	0	N/A	N/A	referenced ground of power and signal
99	MIPI_CSI_RX_CLK0N	LVDS input	lvds	MIPI_CSI_RX_CLK0N	AH10	MIPI CSI receive differential Clock 0 Negative
100	MIPI_CSI_RX_CLK0P	LVDS input	lvds	MIPI_CSI_RX_CLK0P	AG10	MIPI CSI receive differential Clock 0 Positive
101	GND	POWER	0	N/A	N/A	referenced ground of power and signal

102	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
103	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
104	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
105	GND	POWER	0	N/A	N/A	referenced ground of power and signal
106	USB2_HOST2_DM	LVDS output/Input	lvds	USB2_HOST2_DM	R1	USB HOST2 Data Minus
107	USB2_HOST2_DP	LVDS output/Input	lvds	USB2_HOST2_DP	R2	USB HOST2 Data Plus
108	GND	POWER	0	N/A	N/A	referenced ground of power and signal
109	USB2_HOST3_DM	LVDS output/Input	lvds	USB2_HOST3_DM	T1	USB HOST3 Data Minus
110	USB2_HOST3_DP	LVDS output/Input	lvds	USB2_HOST3_DP	T2	USB HOST3 Data Plus
111	GND	POWER	0	N/A	N/A	referenced ground of power and signal
112	MIPI_DSI_TX1_D3P	LVDS output	lvds	MIPI_DSI_TX1_D3P	AD12	MIPI_DSI transmit 1 differential data lane 3 Positive
113	MIPI_DSI_TX1_D3N	LVDS output	lvds	MIPI_DSI_TX1_D3N	AE12	MIPI_DSI transmit 1 differential data lane 3 Negative
114	GND	POWER	0	N/A	N/A	referenced ground of power and signal
115	MIPI_DSI_TX1_D2P	LVDS output	lvds	MIPI_DSI_TX1_D2P	AD14	MIPI_DSI transmit 1 differential data lane 2 Positive
116	MIPI_DSI_TX1_D2N	LVDS output	lvds	MIPI_DSI_TX1_D2N	AC14	MIPI_DSI transmit 1 differential data lane 2 Negative
117	GND	POWER	0	N/A	N/A	referenced ground of power and signal
118	MIPI_DSI_TX1_CLKP	LVDS output	lvds	MIPI_DSI_TX1_CLKP	AD15	MIPI_DSI transmit 1 differential Clock Positive
119	MIPI_DSI_TX1_CLKN	LVDS output	lvds	MIPI_DSI_TX1_CLKN	AE15	MIPI_DSI transmit 1 differential Clock Negative
120	GND	POWER	0	N/A	N/A	referenced ground of power and signal
121	MIPI_DSI_TX1_D1P	LVDS output	lvds	MIPI_DSI_TX1_D1P	AD17	MIPI_DSI transmit 1 differential data lane 1 Positive
122	MIPI_DSI_TX1_D1N	LVDS output	lvds	MIPI_DSI_TX1_D1N	AC17	MIPI_DSI transmit 1 differential data lane 1 Negative
123	GND	POWER	0	N/A	N/A	referenced ground of power and signal
124	MIPI_DSI_TX1_D0P	LVDS output	lvds	MIPI_DSI_TX1_D0P	AD18	MIPI_DSI transmit 1 differential data lane 0 Positive
125	MIPI_DSI_TX1_D0N	LVDS output	lvds	MIPI_DSI_TX1_D0N	AE18	MIPI_DSI transmit 1 differential datalane 0 Negative
126	GND	POWER	0	N/A	N/A	referenced ground of power and signal
127	MIPI_DSI_TX0_D3P/ LVDS_TX0_D3P	LVDS output	lvds	MIPI_DSI_TX0_D3P/LVDS_ TX0_D3P	AH13	MIPI_DSI transmit 0 differential data lane 3 Positive

128	MIPI_DSI_TX0_D3N/ LVDS_TX0_D3N	LVDS output	lvds	MIPI_DSI_TX0_D3N/LVDS_ TX0_D3N	AG13	MIPI_DSI transmit 0 differential data lane 3 Negative
129	GND	POWER	0	N/A	N/A	referenced ground of power and signal
130	MIPI_DSI_TX0_D2P/ LVDS_TX0_D2P	LVDS output	lvds	MIPI_DSI_TX0_D2P/LVDS_ TX0_D2P	AH14	MIPI_DSI transmit 0 differential data lane 2 Positive
131	MIPI_DSI_TX0_D2N/ LVDS_TX0_D2N	LVDS output	lvds	MIPI_DSI_TX0_D2N/LVDS_ TX0_D2N	AG14	MIPI_DSI transmit 0 differential data lane 2 Negative
132	GND	POWER	0	N/A	N/A	referenced ground of power and signal
133	MIPI_DSI_TX0_CLKP /LVDS_TX0_CLKP	LVDS output	lvds	MIPI_DSI_TX0_CLKP/LVDS_ _TX0_CLKP	AH15	MIPI_DSI transmit 0 differential Clock Positive
134	MIPI_DSI_TX0_CLKN /LVDS_TX0_CLKN	LVDS output	lvds	MIPI_DSI_TX0_CLKN/LVDS_ _TX0_CLKN	AG15	MIPI_DSI transmit 0 differential Clock Negative
135	GND	POWER	0	N/A	N/A	referenced ground of power and signal
136	MIPI_DSI_TX0_D1P/ LVDS_TX0_D1P	LVDS output	lvds	MIPI_DSI_TX0_D1P/LVDS_ TX0_D1P	AH16	MIPI_DSI transmit 0 differential data lane 1 Positive
137	MIPI_DSI_TX0_D1N/ LVDS_TX0_D1N	LVDS output	lvds	MIPI_DSI_TX0_D1N/LVDS_ TX0_D1N	AG16	MIPI_DSI transmit 0 differential data lane 1 Negative
138	GND	POWER	0	N/A	N/A	referenced ground of power and signal
139	MIPI_DSI_TX0_D0P/ LVDS_TX0_D0P	LVDS output	lvds	MIPI_DSI_TX0_D0P/LVDS_ TX0_D0P	AH17	MIPI_DSI transmit 0 differential data lane 0 Positive
140	MIPI_DSI_TX0_D0N/ LVDS_TX0_D0N	LVDS output	lvds	MIPI_DSI_TX0_D0N/LVDS_ TX0_D0N	AG17	MIPI_DSI transmit 0 differential data lane 0 Negative
141	GND	POWER	0	N/A	N/A	referenced ground of power and signal
142	GND	POWER	0	N/A	N/A	referenced ground of power and signal
143	HDMI_TXCLKN_POR T	LVDS output	lvds	HDMI_TX_CLKN	AG19	HDMI2.0 transmit differential Clock Negative
144	HDMI_TXCLKP_PORT	LVDS output	lvds	HDMI_TX_CLKP	AH19	HDMI2.0 transmit differential Clock Positive
145	GND	POWER	0	N/A	N/A	referenced ground of power and signal
146	HDMI_TX0N_PORT	LVDS output	lvds	HDMI_TX_D0N	AH20	HDMI2.0 transmit differential data lane 0 Negative
147	HDMI_TX0P_PORT	LVDS output	lvds	HDMI_TX_D0P	AG20	HDMI2.0 transmit differential data lane 0 Positive
148	GND	POWER	0	N/A	N/A	referenced ground of power and signal
149	HDMI_TX1N_PORT	LVDS output	lvds	HDMI_TX_D1N	AH21	HDMI2.0 transmit differential data lane 1 Negative
150	HDMI_TX1P_PORT	LVDS output	lvds	HDMI_TX_D1P	AG21	HDMI2.0 transmit differential data

						lane 1 Positive
151	GND	POWER	0	N/A	N/A	referenced ground of power and signal
152	HDMI_TX2N_PORT	LVDS output	lvds	HDMI_TX_D2N	AH22	HDMI2.0 transmit differential data lane 2 Negative
153	HDMI_TX2P_PORT	LVDS output	lvds	HDMI_TX_D2P	AG22	HDMI2.0 transmit differential data lane 2 Positive
154	GND	POWER	0	N/A	N/A	referenced ground of power and signal
155	PCIE30_REFCLKN_IN	LVDS input	lvds	PCIE30_REFCLKN_IN	AA25	PCIe3.0 differential clock Negative,Only support input
156	PCIE30_REFCLKP_IN	LVDS input	lvds	PCIE30_REFCLKP_IN	Y25	PCIe3.0 differential clock Positive,Only support input
157	GND	POWER	0	N/A	N/A	referenced ground of power and signal
158	PCIE30_RX1N	LVDS input	lvds	PCIE30_RX1N	AD27	PCIe3.0 receive differential data lane 1 Negative
159	PCIE30_RX1P	LVDS input	lvds	PCIE30_RX1P	AD28	PCIe3.0 receive differential data lane 1 Positive
160	GND	POWER	0	N/A	N/A	referenced ground of power and signal
161	PCIE30_RX0N	LVDS input	lvds	PCIE30_RX0N	AC27	PCIe3.0 receive differential data lane 0 Negative
162	PCIE30_RX0P	LVDS input	lvds	PCIE30_RX0P	AC28	PCIe3.0 receive differential data lane 0 Positive
163	GND	POWER	0	N/A	N/A	referenced ground of power and signal
164	PCIE30_TX1N	LVDS output	lvds	PCIE30_TX1N	AB27	PCIe3.0 transmit differential data lane 1 Negative
165	PCIE30_TX1P	LVDS output	lvds	PCIE30_TX1P	AB28	PCIe3.0 transmit differential data lane 1 Positive
166	GND	POWER	0	N/A	N/A	referenced ground of power and signal
167	PCIE30_TX0N	LVDS output	lvds	PCIE30_TX0N	AA27	PCIe3.0 transmit differential data lane 0 Negative
168	PCIE30_TX0P	LVDS output	lvds	PCIE30_TX0P	AA28	PCIe3.0 transmit differential data lane 0 Positive
169	GND	POWER	0	N/A	N/A	referenced ground of power and signal
170	SATA2_RXN	LVDS input	lvds	PCIE20_RXN/SATA2_RXN/ QSGMII_RXN_M1	Y28	PCIe2.0 receive differential Negative
171	SATA2_RXP	LVDS input	lvds	PCIE20_RXP/SATA2_RXP/Q SGMII_RXP_M1	Y27	PCIe2.0 receive differential Positive
172	GND	POWER	0	N/A	N/A	referenced ground of power and signal

173	SATA2_TXN	LVDS output	lvds	PCIE20_TXN/SATA2_TXN/QSGMII_TXN_M1	W28	PCIe2.0 transmit differential Negative
174	SATA2_TXP	LVDS output	lvds	PCIE20_TXP/SATA2_TXP/QSGMII_TXP_M1	W27	PCIe2.0 transmit differential Positive
175	GND	POWER	0	N/A	N/A	referenced ground of power and signal
176	MULTI_PHY1_REFCLKN	LVDS output	lvds	MULTI_PHY1_REFCLKN	U24	MULTI_PHY1 output differential clock Negative for PCIe3.0 EP
177	MULTI_PHY1_REFCLKP	LVDS output	lvds	MULTI_PHY1_REFCLKP	U25	MULTI_PHY1 output differential clock Positive for PCIe3.0 EP
178	GND	POWER	0	N/A	N/A	referenced ground of power and signal
179	MULTI_PHY0_REFCLKN	LVDS output	lvds	MULTI_PHY0_REFCLKN	R25	MULTI_PHY0 output differential clock Negative for PCIe3.0 EP
180	MULTI_PHY0_REFCLKP	LVDS output	lvds	MULTI_PHY0_REFCLKP	R24	MULTI_PHY0 output differential clock Positive for PCIe3.0 EP
181	GND	POWER	0	N/A	N/A	referenced ground of power and signal
182	PCIE20_REFCLKN	LVDS input	lvds	PCIE20_REFCLKN	V25	PCIe3.0 differential clock Negative,Support input or output
183	PCIE20_REFCLKP	LVDS input	lvds	PCIE20_REFCLKP	V24	PCIe3.0 differential clock Positive,Support input or output
184	GND	POWER	0	N/A	N/A	referenced ground of power and signal
185	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
186	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
187	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
188	GND	POWER	0	N/A	N/A	referenced ground of power and signal
189	GND	POWER	0	N/A	N/A	referenced ground of power and signal
190	GND	POWER	0	N/A	N/A	referenced ground of power and signal
191	GMAC0_MDIO	IO input/output	1.8V	I2S2_SDO_M0/GMAC0_MDIO/UART9_CTSn_M0/SPI2_CS0_M0/GPIO2_C4_d	H23	GMAC0 management data
192	GMAC0_MDC	IO input/output	1.8V	I2S2_LRCK_TX_M0/GMAC0_MDC/UART9_RTSn_M0/SP I2_MOSI_M0/GPIO2_C3_d	H24	GMAC0 management data clock
193	GMAC0_MCLKINOUT	IO input/output	1.8V	I2S2_SCLK_TX_M0/GMAC0_MCLKINOUT/UART7_CTSn_M0/SPI2_MISO_M0/GPIO2_C2_d	F25	GMAC0 Master clock input or output
194	ETH0_REFCLKO_25M	IO input/output	1.8V	I2S2_MCLK_M0/ETH0_REFCLKO_25M/UART7_RTSn_M0	G23	CPU Output clock 25MHz for Ethernet PHY0

				M0/SPI2_CLK_M0/GPIO2_C1_d		
195	GMAC0_RXDV_CRS	IO input/output	1.8V	I2S2_LRCK_RX_M0/GMAC0_RXDV_CRS/UART6_CTSn_M0/SPI1_CS0_M0/GPIO2_C0_d	F24	GMAC0 receive data valid/carrier sense
196	GMAC0_RXD1	IO input/output	1.8V	I2S2_SCLK_RX_M0/GMAC0_RXD1/UART6_RTSn_M0/SPI1_MOSI_M0/GPIO2_B7_d	H25	GMAC0 receive data 1
197	GMAC0_RXD0	IO input/output	1.8V	GMAC0_RXD0/UART1_CTSn_M0/SPI1_MISO_M0/GPIO2_B6_u	F27	GMAC0 receive data 0
198	GMAC0_TXEN	IO input/output	1.8V	GMAC0_TXEN/UART1_RTSn_M0/SPI1_CLK_M0/GPIO2_B5_u	G28	GMAC0 transmit enable
199	GMAC0_TXD1	IO input/output	1.8V	GMAC0_TXD1/UART1_TX_M0/GPIO2_B4_u	G27	GMAC0 transmit data 1
200	GMAC0_TXD0	IO input/output	1.8V	GMAC0_TXD0/UART1_RX_M0/GPIO2_B3_u	F28	GMAC0 transmit data 0
201	GMAC0_TXCLK	IO input/output	1.8V	SDMMC1_CLK/GMAC0_TXCLK/UART9_TX_M0/GPIO2_B0_d	D27	GMAC0 transmit Clock
202	GMAC0_TXD3	IO input/output	1.8V	SDMMC1_CMD/GMAC0_TXD3/UART9_RX_M0/GPIO2_A7_u	C28	GMAC0 transmit data 3
203	GMAC0_TXD2	IO input/output	1.8V	SDMMC1_D3/GMAC0_TXD2/UART7_TX_M0/GPIO2_A6_u	C27	GMAC0 transmit data 2
204	GMAC0_RXCLK	IO input/output	1.8V	SDMMC1_D2/GMAC0_RXCLK/UART7_RX_M0/GPIO2_A5_u	B28	GMAC0 receive clock
205	GMAC0_RXD3	IO input/output	1.8V	SDMMC1_D1/GMAC0_RXD3/UART6_TX_M0/GPIO2_A4_u	E28	GMAC0 receive data 3
206	GMAC0_RXD2	IO input/output	1.8V	SDMMC1_D0/GMAC0_RXD2/UART6_RX_M0/GPIO2_A3_u	E27	GMAC0 receive data 2
207	GND	POWER	0	N/A	N/A	referenced ground of power and signal
208	RK809_32KOUT_WIFI	IO output	3.3V	CLK32K	68	32.768KHz clock output, open drain,pull up default.
209	UART8_CTSN_M0	IO input/output	1.8V	SDMMC1_DET/I2C4_SCL_M1/UART8_CTSn_M0/CAN2_TX_M1/GPIO2_B2_u	E25	UART8 clear to send
210	UART8_RTSN_M0	IO input/output	1.8V	SDMMC1_PWREN/I2C4_SD	D26	UART8 request to send

				A_M1/UART8_RTSn_M0/CA N2_RX_M1/GPIO2_B1_d		
211	UART8_RX_M0	IO input/output	1.8V	CLK32K_OUT1/UART8_RX_ M0/SPI1_CS1_M0/GPIO2_C 6_d	E26	UART8 receive data
212	UART8_TX_M0	IO input/output	1.8V	I2S2_SDI_M0/GMAC0_RXE R/UART8_TX_M0/SPI2_CS1 _M0/GPIO2_C5_d	F26	UART8 transmit data
213	GND	POWER	0	N/A	N/A	referenced ground of power and signal
214	SARADC_VIN7	Analog input	analog(1.8V max)	SARADC_VIN7	F21	SAR ADC Channel 7 input
215	SARADC_VIN6	Analog input	analog(1.8V max)	SARADC_VIN6	G20	SAR ADC Channel 6 input
216	SARADC_VIN5	Analog input	analog(1.8V max)	SARADC_VIN5	F22	SAR ADC Channel 5 input
217	SARADC_VIN4	Analog input	analog(1.8V max)	SARADC_VIN4	G21	SAR ADC Channel 4 input
218	SARADC_VIN3	Analog input	analog(1.8V max)	SARADC_VIN3	E23	SAR ADC Channel 3 input
219	SARADC_VIN2_LCD_ ID	Analog input	analog(1.8V max)	SARADC_VIN2	D24	SAR ADC Channel 2 input
220	SARADC_VIN1_EVB_ HW_ID	Analog input	analog(1.8V max)	SARADC_VIN1	C26	SAR ADC Channel 1 input
221	SARADC_VIN0_KEY/ RECOVERY	Analog input	analog(1.8V max)	SARADC_VIN0	B27	SAR ADC Channel 0 input,with Recovery
222	GND	POWER	0	N/A	N/A	referenced ground of power and signal
223	LCD0_RST_L_GPIO1 _D1	IO input/output	1.8V	FSPI_D0/FLASH_RDY/GPIO 1_D1_u	C24	GPIO for LCD0 reset
224	PCIE_USB_SEL_GPIO 1_D0	IO input/output	1.8V	FSPI_CLK/FLASH_ALE/GPI O1_D0_d	A22	GPIO for select USB or PCIE to M2
225	CAMERA0_PWREN_G PIO1_D4	IO input/output	1.8V	FSPI_D3/FLASH_CS1n/GPI O1_D4_u	A27	GPIO for camera0 power enable
226	CRYPTO_RST_GPIO1 _D3	IO input/output	1.8V	FSPI_CS0n/FLASH_CS0n/G PIO1_D3_u	C23	GPIO for crypto chip reset
227	M2_ONOFF_GPIO1_	IO input/output	1.8V	FSPI_D1/FLASH_RDn/GPIO	D23	GPIO for M2 on-off key

	D2			1_D2_u		
228	GND	POWER	0	N/A	N/A	referenced ground of power and signal
229	I2S1_SCLK_RX_M0/PDM_CLK1_M0	IO input/output	3.3V	I2S1_SCLK_RX_M0/UART4_RX_M0/PDM_CLK1_M0/SPDIF_TX_M0/GPIO1_A4_d	F18	PDM clock 1
230	I2S1_SDO1_M0/I2S1_SDI3_M0/PDM_SDI3_M0	IO input/output	3.3V	I2S1_SDO1_M0/I2S1_SDI3_M0/PDM_SDI3_M0/PCIE20_CLKREQn_M2/ACODEC_DAC_DATAR/GPIO1_B0_d	D20	PDM data 3 input
231	I2S1_SDO2_M0/I2S1_SDI2_M0/PDM_SDI2_M0	IO input/output	3.3V	I2S1_SDO2_M0/I2S1_SDI2_M0/PDM_SDI2_M0/PCIE20_WAKEn_M2/ACODEC_AD_C_SYNC/GPIO1_B1_d	E20	PDM data 2 input
232	I2S1_SDO3_M0/I2S1_SDI1_M0/PDM_SDI1_M0	IO input/output	3.3V	I2S1_SDO3_M0/I2S1_SDI1_M0/PDM_SDI1_M0/PCIE20_PERSTn_M2/GPIO1_B2_d	A21	PDM data 1 input
233	GND	POWER	0	N/A	N/A	referenced ground of power and signal
234	GND	POWER	0	N/A	N/A	referenced ground of power and signal
235	GND	POWER	0	N/A	N/A	referenced ground of power and signal
236	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
237	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
238	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
239	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
240	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
241	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
242	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
243	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
244	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
245	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
246	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
247	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
248	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
249	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
250	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
251	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
252	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
253	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
254	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
255	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
256	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED

257	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
258	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
259	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
260	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
261	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
262	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
263	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
264	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
265	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
266	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
267	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
268	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
269	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
270	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
271	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
272	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
273	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
274	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
275	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
276	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
277	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
278	GND	POWER	0	N/A	N/A	referenced ground of power and signal
279	GND	POWER	0	N/A	N/A	referenced ground of power and signal
280	GND	POWER	0	N/A	N/A	referenced ground of power and signal
281	GMAC1_RXDV_CRS_M1	IO input/output	1.8V	ISP_PRELIGHT_TRIG/EBC_SDCE3/GMAC1_RXDV_CRS_M1/I2S1_SDO2_M1/GPIO4_B1_d	V2	GMAC1 receive data valid/carrier sense
282	GMAC1_RXD1_M1	IO input/output	1.8V	CAM_CLKOUT1/EBC_SDCE2/GMAC1_RXD1_M1/SPI3_MISO_M0/I2S1_SDO1_M1/GPIO4_B0_d	V7	GMAC1 receive data 1
283	GMAC1_RXD0_M1	IO input/output	1.8V	CAM_CLKOUT0/EBC_SDCE1/GMAC1_RXD0_M1/SPI3_CS1_M0/I2S1_LRCK_RX_M1/GPIO4_A7_d	W1	GMAC1 receive data 0
284	GMAC1_TXEN_M1	IO input/output	1.8V	ISP_FLASHTRIGOUT/EBC_SDCE0/GMAC1_TXEN_M1/SPI3_CS0_M0/I2S1_SCLK_RX_M1/GPIO4_A6_d	W2	GMAC1 transmit enable
285	GMAC1_TXD1_M1	IO input/output	1.8V	CIF_D15/EBC_SDDO15/GMAC1_TXD1_M1/UART9_RX_	Y1	GMAC1 transmit data 1

				M2/I2S2_LRCK_RX_M1/GPI O4_A5_d		
286	GMAC1_TXD0_M1	IO input/output	1.8V	CIF_D14/EBC_SDDO14/GM AC1_TXD0_M1/UART9_TX_ M2/I2S2_LRCK_TX_M1/GPI O4_A4_d	Y2	GMAC1 transmit data 0
287	GMAC1_RXCLK_M1	IO input/output	1.8V	CIF_D13/EBC_SDDO13/GM AC1_RXCLK_M1/UART7_RX_ _M2/PDM_SDI3_M1/GPIO4 _A3_d	Y3	GMAC1 receive clock
288	GMAC1_RXD3_M1	IO input/output	1.8V	CIF_D12/EBC_SDDO12/GM AC1_RXD3_M1/UART7_TX_ M2/PDM_SDI2_M1/GPIO4_ A2_d	Y4	GMAC1 receive data 3
289	GMAC1_RXD2_M1	IO input/output	1.8V	CIF_D11/EBC_SDDO11/GM AC1_RXD2_M1/PDM_SDI1_ M1/GPIO4_A1_d	AA2	GMAC1 receive data 2
290	GMAC1_TXCLK_M1	IO input/output	1.8V	CIF_D10/EBC_SDDO10/GM AC1_TXCLK_M1/PDM_CLK1 _M1/GPIO4_A0_d	AA3	GMAC1 transmit Clock
291	GMAC1_TXD3_M1	IO input/output	1.8V	CIF_D9/EBC_SDDO9/GMAC 1_TXD3_M1/UART1_RX_M 1/PDM_SDI0_M1/GPIO3_D 7_d	Y5	GMAC1 transmit data 3
292	GMAC1_TXD2_M1	IO input/output	1.8V	CIF_D8/EBC_SDDO8/GMAC 1_TXD2_M1/UART1_TX_M 1/PDM_CLK0_M1/GPIO3_D 6_d	Y6	GMAC1 transmit data 2
293	GMAC1_RSTN_GPIO 2_D1	IO input/output	1.8V	LCDC_D1/VOP_BT656_D1_ M0/SPI0_MOSI_M1/PCIE20 _WAKEn_M1/I2S1_SCLK_T X_M2/GPIO2_D1_d	AD7	GPIO OUT for GMAC1 reset
294	USB_PWEREN_GPIO 2_D0	IO input/output	1.8V	LCDC_D0/VOP_BT656_D0_ M0/SPI0_MISO_M1/PCIE20 _CLKREQn_M1/I2S1_MCLK _M2/GPIO2_D0_d	AG6	GPIO OUT for USB power enable
295	GMAC1_MCLKINOUT _M1	IO input/output	1.8V	CIF_CLKIN/EBC_SDCLK/GM AC1_MCLKINOUT_M1/UAR T1_CTSn_M1/I2S2_SCLK_R X_M1/GPIO4_C1_d	U2	GMAC1 reference clock input or output
296	ETH1_REFCKO_25M _M0	IO input/output	3.3V	LCDC_D15/VOP_BT1120_D 6/ETH1_REFCKO_25M_M0 /SDMMC2_PWREN_M1/GPI O3_B0_d	AG2	CPU Output clock 25MHz for Ethernet PHY1
297	GMAC1_MDIO_M1	IO input/output	1.8V	CIF_VSYNC/EBC_SDOE/GM AC1_MDIO_M1/I2S2_SCLK	U4	GAMC1 management data

				_TX_M1/GPIO4_B7_d		
298	GMAC1_MDC_M1	IO input/output	1.8V	CIF_HREF/EBC_SDLE/GMAC1_MDC_M1/UART1_RTSn_M1/I2S2_MCLK_M1/GPIO4_B6_d	U5	GMAC1 management data clock
299	GND	POWER	0	N/A	N/A	referenced ground of power and signal
300	I2C4_SCL_M0	IO input/output	1.8V	I2C4_SCL_M0/EBC_GDOE/ETH1_REFCLKO_25M_M1/SPI3_CLK_M0/I2S2_SDO_M1/GPIO4_B3_d	V1	I2C4 bus clock for camera
301	I2C4_SDA_M0	IO input/output	1.8V	I2C4_SDA_M0/EBC_VCOM/GMAC1_RXER_M1/SPI3_MOSI_M0/I2S2_SDI_M1/GPIO4_B2_d	V4	I2C4 bus Data/Address for camera
302	GND	POWER	0	N/A	N/A	referenced ground of power and signal
303	PWM14_M0	IO input/output	3.3V	PWM14_M0/VOP_PWM_M1/GMAC1_MDC_M0/UART7_TX_M1/PDM_CLK1_M2/GPIO3_C4_d	AC3	Pulse Width Modulation 14 input or output
304	CAMERA0_RST_L_GPIO4_B5	IO input/output	3.3V	I2C2_SCL_M1/EBC_SDSHR/CAN2_TX_M0/I2S1_SDO3_M1/GPIO4_B5_d	V5	GPIO OUT For Camera0 reset
305	CAMERA0_PDN_L_GPIO4_B4	IO input/output	3.3V	I2C2_SDA_M1/EBC_GDSP/CAN2_RX_M0/ISP_FLASH_TRIGIN/VOP_BT656_CLK_M1/GPIO4_B4_d	V6	GPIO OUT For Camera0 power down
306	LCD1_RST_L_GPIO3_B6	IO input/output	3.3V	LCDC_D21/VOP_BT1120_D12/GMAC1_TXD1_M0/I2C3_SDA_M1/PWM11_IR_M0/GPIO3_B6_d	AE3	GPIO out for LCD0 reset
307	M2_RESET_GPIO3_B5	IO input/output	3.3V	LCDC_D20/VOP_BT1120_D11/GMAC1_TXD0_M0/I2C3_SCL_M1/PWM10_M0/GPIO3_B5_d	AE2	GPIO out for m2 reset
308	GND	POWER	0	N/A	N/A	referenced ground of power and signal
309	SDMMC2_CLK_M0	IO input/output	3.3V	CIF_D5/EBC_SDDO5/SDMMC2_CLK_M0/I2S1_SDI1_M1/VOP_BT656_D5_M1/GPIO3_D3_d	AC1	SDMMC2 Clock
310	SDMMC2_CMD_M0	IO input/output	3.3V	CIF_D4/EBC_SDDO4/SDMMC2_CMD_M0/I2S1_SDI0_M1/VOP_BT656_D4_M1/GPIO3_D2_d	Y7	SDMMC2 Command

311	SDMMC2_D0_M0	IO input/output	3.3V	CIF_D0/EBC_SDDO0/SDMMC2_D0_M0/I2S1_MCLK_M1/VOP_BT656_D0_M1/GPIO3_C6_d	AC5	SDMMC2 data 0
312	SDMMC2_D1_M0	IO input/output	3.3V	CIF_D1/EBC_SDDO1/SDMMC2_D1_M0/I2S1_SCLK_TX_M1/VOP_BT656_D1_M1/GPIO3_C7_d	AA6	SDMMC2 data 1
313	SDMMC2_D2_M0	IO input/output	3.3V	CIF_D2/EBC_SDDO2/SDMMC2_D2_M0/I2S1_LRCK_TX_M1/VOP_BT656_D2_M1/GPIO3_D0_d	AB5	SDMMC2 data 2
314	SDMMC2_D3_M0	IO input/output	3.3V	CIF_D3/EBC_SDDO3/SDMMC2_D3_M0/I2S1_SDO0_M1/VOP_BT656_D3_M1/GPIO3_D1_d	AB1	SDMMC2 data 3
315	GND	POWER	0	N/A	N/A	referenced ground of power and signal
316	UART5_TX_M1_GPIO3_C2	IO input/output	3.3V	LCDC_VSYNC/VOP_BT1120_D14/SPI1_MISO_M1/UART5_TX_M1/I2S1_SDO3_M2/GPIO3_C2_d	AA7	UART serial data output
317	EDP_BL_EN_GPIO3_C1	IO input/output	3.3V	LCDC_HSYNC/VOP_BT1120_D13/SPI1_MOSI_M1/PCIE20_PERSTn_M1/I2S1_SDO2_M2/GPIO3_C1_d	AD1	GPIO for edp backlight enable
318	GND	POWER	0	N/A	N/A	referenced ground of power and signal
319	I2C1_SDA_TP	IO input/output	3.3V	I2C1_SDA/CAN0_RX_M0/PCIE20_BUTTONRSTn/MCU_JTAG_TCK/GPIO0_B4_u	AB20	I2C1 bus Data/Address touch panel
320	I2C1_SCL_TP	IO input/output	3.3V	I2C1_SCL/CAN0_TX_M0/PCIE30X1_BUTTONRSTn/MCU_JTAG_TDO/GPIO0_B3_u	AG24	I2C1 bus clock for touch panel
321	TP_RST_L_GPIO0_B6	IO input/output	3.3V	I2C2_SDA_M0/SPI0_MOSI_M0/PCIE20_PERSTn_M0/PWM2_M1/GPIO0_B6_u	AA20	GPIO out for touch panel reset
322	TP_INT_L_GPIO0_B5	IO input/output	3.3V	I2C2_SCL_M0/SPI0_CLK_M0/PCIE20_WAKEn_M0/PWM1_M1/GPIO0_B5_u	AC22	GPIO in for touch panel interrupt
323	GND	POWER	0	N/A	N/A	referenced ground of power and signal
324	GND	POWER	0	N/A	N/A	referenced ground of power and signal
325	GND	POWER	0	N/A	N/A	referenced ground of power and signal

326	HDMITX_SCL	IO input/output	3.3V	HDMITX_SCL/I2C5_SCL_M1/GPIO4_C7_u	AG8	HDMI2.0 TX I2C bus Clock
327	HDMITX_SDA	IO input/output	3.3V	HDMITX_SDA/I2C5_SDA_M1/GPIO4_D0_u	AG7	HDMI2.0 TX I2C bus Data/Address
328	HDMITX_CEC_M0	IO input/output	3.3V	HDMITX_CEC_M0/SPI3_CS1_M1/GPIO4_D1_u	AH6	HDMI2.0 TX CEC
329	HDMI_TX_HPDIN	IO input	3.3V/5V	HDMI_TX_HPDIN	AB18	HDMI2.0 Hot Plug Detection interrupt with 5V tolerance
330	GND	POWER	0	N/A	N/A	referenced ground of power and signal
331	LCD1_PWREN_H_GP IO4_D2	IO input/output	3.3V	GPIO4_D2_d	AB9	GPIO for LCD1 power enable
332	SATA0_LED	IO input/output	3.3V	PWM13_M1/SPI3_CS0_M1/ SATA0_ACT_LED/UART9_R X_M1/I2S3_SDI_M1/GPIO4 _C6_d	AE8	SATA0 LED control output
333	EDP_PWM12_GPIO4 _C5	IO input/output	3.3V	PWM12_M1/SPI3_MISO_M 1/SATA1_ACT_LED/UART9 _TX_M1/I2S3_SDO_M1/GP IO4_C5_d	AD8	Pulse Width Modulation 12 output for edp backlight
334	SATA2_LED	IO input/output	3.3V	EDP_HPDIN_M0/SPDIF_TX _M2/SATA2_ACT_LED/PCIE 30X2_PERSTn_M2/I2S3_LR CK_M1/GPIO4_C4_d	AH7	SATA2 LED control output
335	CAN1_TX_M1_GPIO4 _C3	IO input/output	3.3V	PWM15_IR_M1/SPI3_MOSI _M1/CAN1_TX_M1/PCIE30 X2_WAKEn_M2/I2S3_SCLK _M1/GPIO4_C3_d	AA11	CAN1 transmit data
336	CAN1_RX_M1_GPIO4 _C2	IO input/output	3.3V	PWM14_M1/SPI3_CLK_M1/ CAN1_RX_M1/PCIE30X2_C LKREQn_M2/I2S3_MCLK_M 1/GPIO4_C2_d	AF8	CAN1 receive data
337	GND	POWER	0	N/A	N/A	referenced ground of power and signal
338	HP_IN_GPIO3_A7	IO input/output	3.3V	LCDC_D14/VOP_BT1120_D 5/GMAC1_RXCLK_M0/SDM MC2_DET_M1/GPIO3_A7_d	AH2	GPIO for headphone input detect
339	U2_EN_GPIO2_D7	IO input/output	3.3V	LCDC_D7/VOP_BT656_D7_ M0/SPI2_MISO_M1/UART8 _TX_M1/I2S1_SDO0_M2/G PIO2_D7_d	AH5	GPIO out for U2 power output enable
340	PCIE30X2_PERSTN_ M1	IO input/output	3.3V	LCDC_D6/VOP_BT656_D6_ M0/SPI2_MOSI_M1/PCIE30 X2_PERSTn_M1/I2S1_SDI3 _M2/GPIO2_D6_d	AD6	PCIe3.0 X2Lane Global reset
341	PCIE30X2_WAKEN_M	IO input/output	3.3V	LCDC_D5/VOP_BT656_D5_ M0/SPI2_MISO_M1/UART8 _TX_M1/I2S1_SDO0_M2/G PIO2_D7_d	AF6	PCIe3.0 X2Lane Wake

	1			M0/SPI2_CS0_M1/PCIE30X2_WAKEn_M1/I2S1_SDI2_M2/GPIO2_D5_d		
342	PCIE30X2_CLKREQN_M1	IO input/output	3.3V	LCDC_D4/VOP_BT656_D4_M0/SPI2_CS1_M1/PCIE30X2_CLKREQn_M1/I2S1_SDI1_M2/GPIO2_D4_d	AF5	PCIe3.0 x2Lane Reference clock request
343	GND	POWER	0	N/A	N/A	referenced ground of power and signal
344	I2C0_SDA_PMIC	IO input/output	3.3V	I2C0_SDA	AB21	I2C0 bus Data/Address. Attention: I2C0 cannot be used as normal GPIO
345	I2C0_SCL_PMIC	IO input/output	3.3V	I2C0_SCL	AF24	I2C0 bus clock Attention: I2C0 cannot be used as normal GPIO
346	GMAC1_INT_GPIO0_A6	IO input/output	3.3V	GPU_PWREN/SATA_CP_PO D/PCIE30X2_CLKREQn_M0/GPIO0_A6_d	AE24	GPIO in for Gmac1 interrupt
347	WL_EN_GPIO0_A5	IO input/output	3.3V	SDMMC0_PWREN/SATA_M P_SWITCH/PCIE20_CLKREQn_M0/GPIO0_A5_d	AF25	GPIO for wifi enable
348	GND	POWER	0	N/A	N/A	referenced ground of power and signal
349	RECOVERY_GPIO0_D6	IO input/output	1.8V	GPIO0_D6_d	AC24	GPIO for Recovery button
350	WL_WAKE_GPIO0_D5	IO input/output	1.8V	GPIO0_D5_d	AD25	GPIO for wifi wakeup
351	PCIE_PWREN_H_GPIO0_D4	IO input/output	1.8V	GPIO0_D4_d	AB23	GPIO out for pcie power enable
352	RTCIC_INT_L_GPIO0_D3	IO input/output	1.8V	GPIO0_D3_d	AE26	GPIO in for RTC interrupt
353	GND	POWER	0	N/A	N/A	referenced ground of power and signal
354	LCD0_PWREN_H_GPIO0_C7	IO input/output	3.3V	HDMITX_CEC_M1/PWM0_M1/UART0_CTSn/GPIO0_C7_d	AH25	GPIO out for LCD0 power enable
355	MINIPcie_PWREN_H_GPIO0_C5	IO input/output	3.3V	PWM6/SPI0_MISO_M0/PCIE30X2_WAKEn_M0/GPIO0_C5_d	AC21	GPIO out for MINIPcie Power enable
356	LCD1_BL_PWM5	IO input/output	3.3V	PWM5/SPI0_CS1_M0/UART0_RTSn/GPIO0_C4_d	AD21	Pulse Width Modulation 5
357	LCD0_BL_PWM4	IO input/output	3.3V	PWM4/VOP_PWM_M0/PCIE30X1_PERSTn_M0/MCU_JTAG_TRSTn/GPIO0_C3_d	AE23	LCD Backlight Pulse Width Modulation
358	EDP_HPD_GPIO0_C2	IO input/output	3.3V	PWM3_IR/EDP_HPDIN_M1/	AG23	EDP hot plug detect signal

				PCIE30X1_WAKEn_M0/MC U_JTAG_TMS/GPIO0_C2_d		
359	VCC3V3_SD	POWER output	3.3V/1.8V	SWOUT2	58	Power switch out 2, Power for SD socket
360	SDMMC0_DET_L	IO input/output	3.3V	SDMMC0_DET/SATA_CP_DET/PCIE30X1_CLKREQn_M0/GPIO0_A4_u	Y22	SDMMC0 detect input
361	SDMMC0_CLK	IO input/output	3.3V	SDMMC0_CLK/TEST_CLKOUT/UART5_TX_M0/CAN0_RX_M1/GPIO2_A2_d	H28	SDMMC0 Clock
362	SDMMC0_CMD	IO input/output	3.3V	SDMMC0_CMD/PWM10_M1/UART5_RX_M0/CAN0_TX_M1/GPIO2_A1_u	H27	SDMMC0 Command
363	SDMMC0_D3	IO input/output	3.3V	SDMMC0_D3/ARMJTAG_TMS/UART5_RTSn_M0/GPIO2_A0_u	J23	SDMMC0 data 3
364	SDMMC0_D2	IO input/output	3.3V	SDMMC0_D2/ARMJTAG_TCK/UART5_CTSn_M0/GPIO1_D7_u	H26	SDMMC0 data 2
365	SDMMC0_D1	IO input/output	3.3V	SDMMC0_D1/UART2_RX_M1/UART6_RX_M1/PWM9_M1/GPIO1_D6_u	J24	SDMMC0 data 1
366	SDMMC0_D0	IO input/output	3.3V	SDMMC0_D0/UART2_TX_M1/UART6_TX_M1/PWM8_M1/GPIO1_D5_u	J25	SDMMC0 data 0
367	PWM7_IR	IO input/output	3.3V	PWM7_IR/SPI0_CS0_M0/PCIE30X2_PERSTn_M0/GPIO0_C6_d	AD20	Pulse Width Modulation 7 input for IR receiver
368	GND	POWER	0	N/A	N/A	referenced ground of power and signal
369	GND	POWER	0	N/A	N/A	referenced ground of power and signal
370	VCC3V3_VIN	POWER input	3.3V	N/A	N/A	Power supply for PMU to all DCDC and LDO
371	VCC3V3_VIN	POWER input	3.3V	N/A	N/A	Power supply for PMU to all DCDC and LDO
372	VCC3V3_VIN	POWER input	3.3V	N/A	N/A	Power supply for PMU to all DCDC and LDO
373	VCC3V3_VIN	POWER input	3.3V	N/A	N/A	Power supply for PMU to all DCDC and LDO
374	VCC3V3_VIN	POWER input	3.3V	N/A	N/A	Power supply for PMU to all DCDC and LDO
375	VCC3V3_VIN	POWER input	3.3V	N/A	N/A	Power supply for PMU to all DCDC and LDO
376	VCC3V3_VIN	POWER input	3.3V	N/A	N/A	Power supply for PMU to all DCDC

						and LDO
377	VCC3V3_VIN	POWER input	3.3V	N/A	N/A	Power supply for PMU to all DCDC and LDO
378	GND	POWER	0	N/A	N/A	referenced ground of power and signal
379	GND	POWER	0	N/A	N/A	referenced ground of power and signal
380	GND	POWER	0	N/A	N/A	referenced ground of power and signal
381	GND	POWER	0	N/A	N/A	referenced ground of power and signal
382	GND	POWER	0	N/A	N/A	referenced ground of power and signal
383	GND	POWER	0	N/A	N/A	referenced ground of power and signal
384	GND	POWER	0	N/A	N/A	referenced ground of power and signal
385	GND	POWER	0	N/A	N/A	referenced ground of power and signal
386	VCC5V_CPU	POWER input	5V	N/A	N/A	Power supply for DCDC to CPU
387	VCC5V_CPU	POWER input	5V	N/A	N/A	Power supply for DCDC to CPU
388	VCC5V_CPU	POWER input	5V	N/A	N/A	Power supply for DCDC to CPU
389	VCC5V_CPU	POWER input	5V	N/A	N/A	Power supply for DCDC to CPU
390	VCC5V_CPU	POWER input	5V	N/A	N/A	Power supply for DCDC to CPU
391	VCC5V_CPU	POWER input	5V	N/A	N/A	Power supply for DCDC to CPU
392	GND	POWER	0	N/A	N/A	referenced ground of power and signal
393	GND	POWER	0	N/A	N/A	referenced ground of power and signal
394	GND	POWER	0	N/A	N/A	referenced ground of power and signal
395	GND	POWER	0	N/A	N/A	referenced ground of power and signal
396	GND	POWER	0	N/A	N/A	referenced ground of power and signal
397	GND	POWER	0	N/A	N/A	referenced ground of power and signal
398	EXT_EN	IO output	3.3V	EXT_EN	60	Enable Signal for external high voltage BUCK
399	VDC	Analog input	analog	VDC	61	If it exceeds 0.55V for the first time, it will start the PMIC(rising edge triggering start).And it is connected to the divider of external power supply generally.

400	PWRON_KEY	IO input	3.3V	PWRON	52	Power on key input, active low, internal 17k resistor pull high to VCC_RTC
401	RESET_KEY	IO input	3.3V	RESETB	67	Reset pin after power on, active low, pull up default.
402	GND	POWER	0	N/A	N/A	referenced ground of power and signal
403	BAT_GNDN	Analog input	analog	SNSN	63	Bat charging and discharging sense current negative pin
404	BAT_GNDP	Analog input	analog	SNSP	62	Bat charging and discharging sense current positive pin
405	VBAT	Analog input	analog	BATDIV	56	Divided voltage of positive battery
406	GND	POWER	0	N/A	N/A	referenced ground of power and signal
407	USB3_OTG0_VBUSDET	IO input	3.3V	USB3_OTG0_VBUSDET	M24	USB3 OTG0 connected vbus power detect
408	USB3_OTG0_ID	IO input	3.3V	USB3_OTG0_ID	L23	USB3 OTG0 ID detect
409	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
410	GND	POWER	0	N/A	N/A	referenced ground of power and signal
411	GND	POWER	0	N/A	N/A	referenced ground of power and signal
412	GND	POWER	0	N/A	N/A	referenced ground of power and signal
413	I2C3_SDA_M0	IO input/output	3.3V	I2C3_SDA_M0/UART3_RX_M0/CAN1_RX_M0/AUDIOPWM_LOUT_P/ACODEC_ADC_DATA/GPIO1_A0_u	D18	I2C3 bus Data/Address
414	I2C3_SCL_M0	IO input/output	3.3V	I2C3_SCL_M0/UART3_TX_M0/CAN1_TX_M0/AUDIOPWM_LOUT_N/ACODEC_ADC_CLK/GPIO1_A1_u	E18	I2C3 bus clock
415	GND	POWER	0	N/A	N/A	referenced ground of power and signal
416	MASKROM_KEY	IO input	1.8V	EMMC_D0/FLASH_D0/GPIO1_B4_u	A24	for booting from emmc or USB after reset
417	GND	POWER	0	N/A	N/A	referenced ground of power and signal
418	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
419	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
420	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
421	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
422	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
423	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
424	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED

425	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
426	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
427	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
428	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
429	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
430	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
431	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
432	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
433	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
434	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
435	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
436	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
437	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
438	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
439	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
440	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
441	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
442	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
443	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
444	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
445	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
446	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
447	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
448	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
449	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
450	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
451	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
452	GND	POWER	0	N/A	N/A	referenced ground of power and signal
453	GND	POWER	0	N/A	N/A	referenced ground of power and signal
454	GND	POWER	0	N/A	N/A	referenced ground of power and signal
455	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
456	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
457	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
458	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
459	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
460	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
461	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
462	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
463	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
464	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
465	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED

466	GND	POWER	0	N/A	N/A	referenced ground of power and signal
467	CIF_CLKOUT	IO input/output	1.8V	CIF_CLKOUT/EBC_GDCLK/ PWM11_IR_M1/GPIO4_C0_d	U3	Camera Master clock output for parallel interface
468	GND	POWER	0	N/A	N/A	referenced ground of power and signal
469	USBHUB_RESET_GPIO3_B4	IO input/output	3.3V	LCDC_D19/VOP_BT1120_D10/GMAC1_RXER_M0/I2C5_SDA_M0/PDM_SDI1_M2/GPIO3_B4_d	AE1	GPIO for USB HUB reset
470	PCIE_CLKEN_GPIO3_B3	IO input/output	3.3V	LCDC_D18/VOP_BT1120_D9/GMAC1_RXDV_CRS_M0/I2C5_SCL_M0/PDM_SDI0_M2/GPIO3_B3_d	AF1	GPIO for PCIE 100MHz clock enable
471	GND	POWER	0	N/A	N/A	referenced ground of power and signal
472	SPDIF_TX_M1	IO input/output	3.3V	PWM15_IR_M0/SPDIF_TX_M1/GMAC1_MDIO_M0/UAR T7_RX_M1/I2S1_LRCK_RX_M2/GPIO3_C5_d	AC2	SPDIF transmit
473	GND	POWER	0	N/A	N/A	referenced ground of power and signal
474	UART5_RX_M1_GPIO3_C3	IO input/output	3.3V	LCDC_DEN/VOP_BT1120_D15/SPI1_CLK_M1/UART5_RX_M1/I2S1_SCLK_RX_M2/GPIO3_C3_d	AC4	UART serial data input
475	UART3_RX_M1	IO input/output	3.3V	LCDC_D23/PWM13_M0/GMAC1_MCLKINOUT_M0/UAR T3_RX_M1/PDM_SDI3_M2/GPIO3_C0_d	AD2	UART3 receive data
476	UART3_TX_M1	IO input/output	3.3V	LCDC_D22/PWM12_M0/GMAC1_TXEN_M0/UART3_TX_M1/PDM_SDI2_M2/GPIO3_B7_d	AD4	UART3 transmit data
477	GND	POWER	0	N/A	N/A	referenced ground of power and signal
478	BEEP_EN_GPIO3_D5	IO input/output	1.8V	CIF_D7/EBC_SDDO7/SDMMC2_PWREN_M0/I2S1_SDI3_M1/VOP_BT656_D7_M1/GPIO3_D5_d	AA5	GPIO for beep enable
479	MINIPICIE_RESET_GPIO3_D4	IO input/output	1.8V	CIF_D6/EBC_SDDO6/SDMMC2_DET_M0/I2S1_SDI2_M1/VOP_BT656_D6_M1/GPIO3_D4_d	AA1	GPIO for MiniPCIE reset
480	HOST_WAKE_BT_H_	IO input/output	3.3V	LCDC_D9/VOP_BT1120_D1	AE5	GPIO OUT for Host wakeup BT

	GPIO3_A2			/GMAC1_TXD2_M0/I2S3_MCLK_M0/SDMMC2_D1_M1/GPIO3_A2_d		
481	BT_WAKE_HOST_H_GPIO3_A1	IO input/output	3.3V	LCDC_D8/VOP_BT1120_D0/SPI1_CS0_M1/PCIE30X1_PERSTn_M1/SDMMC2_D0_M1/GPIO3_A1_d	AB8	GPIO IN For BT wakeup Host
482	BT_REG_ON_H_GPIO3_A0	IO input/output	3.3V	LCDC_CLK/VOP_BT656_CLK_M0/SPI2_CLK_M1/UART8_RX_M1/I2S1_SDO1_M2/GPIO3_A0_d	AH4	GPIO OUT For BT enable
483	GND	POWER	0	N/A	N/A	referenced ground of power and signal
484	UART4_TX_M1	IO input/output	3.3V	LCDC_D17/VOP_BT1120_D8/GMAC1_RXD1_M0/UART4_TX_M1/PWM9_M0/GPIO3_B2_d	AF2	UART4 transmit data
485	UART4_RX_M1	IO input/output	3.3V	LCDC_D16/VOP_BT1120_D7/GMAC1_RXD0_M0/UART4_RX_M1/PWM8_M0/GPIO3_B1_d	AG1	UART4 receive data
486	GND	POWER	0	N/A	N/A	referenced ground of power and signal
487	GMAC0_RSTN_GPIO2_D3	IO input/output	1.8V	LCDC_D3/VOP_BT656_D3_M0/SPI0_CLK_M1/PCIE30X1_WAKEn_M1/I2S1_SDI0_M2/GPIO2_D3_d	AC7	GPIO OUT for GMAC0 reset
488	GMAC0_INT/PMEB_GPIO2_D2	IO input/output	1.8V	LCDC_D2/VOP_BT656_D2_M0/SPI0_CS0_M1/PCIE30X1_CLKREqn_M1/I2S1_LRC_K_TX_M2/GPIO2_D2_d	AC8	GPIO IN For GMAC0 interrupt
489	GND	POWER	0	N/A	N/A	referenced ground of power and signal
490	I2S3_SDI_M0	IO input/output	3.3V	LCDC_D13/VOP_BT1120_CLK/GMAC1_TXCLK_M0/I2S3_SDI_M0/SDMMC2_CLK_M1/GPIO3_A6_d	AG3	I2S3 data input
491	I2S3_SDO_M0	IO input/output	3.3V	LCDC_D12/VOP_BT1120_D4/GMAC1_RXD3_M0/I2S3_SDO_M0/SDMMC2_CMD_M1/GPIO3_A5_d	AH3	I2S3 data output
492	I2S3_LRCK_M0	IO input/output	3.3V	LCDC_D11/VOP_BT1120_D3/GMAC1_RXD2_M0/I2S3_LRCK_M0/SDMMC2_D3_M1/GPIO3_A4_d	AF4	I2S3 Left Right channel clock
493	I2S3_SCLK_M0	IO input/output	3.3V	LCDC_D10/VOP_BT1120_D	AG4	I2S3 serial clock

				2/GMAC1_TXD3_M0/I2S3_SCLK_M0/SDMMC2_D2_M1/GPIO3_A3_d		
494	GND	POWER	0	N/A	N/A	referenced ground of power and signal
495	GND	POWER	0	N/A	N/A	referenced ground of power and signal
496	GND	POWER	0	N/A	N/A	referenced ground of power and signal
497	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
498	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
499	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
500	NC	NOT CONNECTED	float	N/A	N/A	NOT CONNECTED
501	GND	POWER	0	N/A	N/A	referenced ground of power and signal
502	WAKEUP_MINIPICIE_GPIO0_C1	IO input/output	3.3V	PWM2_M0/NPUAVS/UART0_TX/MCU_JTAG_TDI/GPIO0_C1_d	AF23	GPIO for MiniPCIE wakeup
503	CLK32K_OUT0	IO input/output	3.3V	CLK32K_IN/CLK32K_OUT0/PCIE30X2_BUTTONRSTn/GPIO0_B0_u	AD23	SOC output 32.768KHz clock 0
504	REFCLK_OUT_CAM	IO input/output	3.3V	REFCLK_OUT/GPIO0_A0_d	AG27	Reference clock output for camera
505	GND	POWER	0	N/A	N/A	referenced ground of power and signal
506	M2_WAKE_GPIO0_B7	IO input/output	3.3V	PWM0_M0/CPUAVS/GPIO0_B7_d	AH26	GPIO for M2 wakeup
507	WORKING_LEDEN_H_GPIO0_C0	IO input/output	3.3V	PWM1_M0/GPUAVS/UART0_RX/GPIO0_C0_d	AD22	GPIO out for working led blink
508	GND	POWER	0	N/A	N/A	referenced ground of power and signal
509	UART2_TX_M0_DEB_UG	IO input/output	3.3V	UART2_TX_M0/GPIO0_D1_u	AH24	UART2 transmit data
510	UART2_RX_M0_DEB_UG	IO input/output	3.3V	UART2_RX_M0/GPIO0_D0_u	AC20	UART2 receive data
511	GND	POWER	0	N/A	N/A	referenced ground of power and signal
512	HPR_OUT	Analog output	analog	HPR_OUT	41	Right channel output of the headphone
513	HP_SNS	Analog output	analog	HP_SNS	40	Reference ground for the headphone
514	HPL_OUT	Analog output	analog	HPL_OUT	39	Left channel output of the headphone
515	GND	POWER	0	N/A	N/A	referenced ground of power and signal
516	MIC1N	Analog input	analog	MICIN	42	Negative input of the Microphone
517	MIC1P	Analog input	analog	MICIP	43	Positive input of the Microphone
518	GND	POWER	0	N/A	N/A	referenced ground of power and

						signal
519	SPK_OUTP	Analog output	analog	SPKP_OUT	32	Positive speaker driver output
520	SPK_OUTP	Analog output	analog	SPKP_OUT	32	Positive speaker driver output
521	SPK_OUTN	Analog output	analog	SPKN_OUT	34	Negative speaker driver output.
522	SPK_OUTN	Analog output	analog	SPKN_OUT	34	Negative speaker driver output.
523	GND	POWER	0	N/A	N/A	referenced ground of power and signal
524	GND	POWER	0	N/A	N/A	referenced ground of power and signal
525	GND	POWER	0	N/A	N/A	referenced ground of power and signal
526	GND	POWER	0	N/A	N/A	referenced ground of power and signal
527	VCC_1V8	POWER output	1.8V	N/A	N/A	Power output to supply 1.8V devices
528	VCC_1V8	POWER output	1.8V	N/A	N/A	Power output to supply 1.8V devices
529	VCC_1V8	POWER output	1.8V	N/A	N/A	Power output to supply 1.8V devices
530	VCC_1V8	POWER output	1.8V	N/A	N/A	Power output to supply 1.8V devices
531	GND	POWER	0	N/A	N/A	referenced ground of power and signal
532	GND	POWER	0	N/A	N/A	referenced ground of power and signal
533	GND	POWER	0	N/A	N/A	referenced ground of power and signal
534	VCC5V0_SPK	POWER input	5V	VCC_SPK_HP	33	Power supply for speaker and charger pump
535	VCC5V0_SPK	POWER input	5V	VCC_SPK_HP	33	Power supply for speaker and charger pump
536	VCC5V0_SPK	POWER input	5V	VCC_SPK_HP	33	Power supply for speaker and charger pump

4. Support

4.1 Technical Support

MIXTILE technical support team assists you with the questions you may have. Contact us with the following methods below.

Email: support@mixtile.com

Website: <https://www.mixtile.com>